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The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

Listing of The Claims:

1. (Currently Cancelled) An enzyme mixture for DNA synthesis comprising a first enzyme and a second enzyme, wherein said first enzyme comprises a DNA polymerization activity, and said second enzyme is a mutant Pfu DNA polymerase comprising one or more mutations at amino acid positions selected from the group consisting of: D405, Y410, T542, D543, K593, Y595, Y385, G387, and G388.

2. (Currently Cancelled) The enzyme mixture of claim 1, wherein said first enzyme is a DNA polymerase or a reverse transcriptase.

3. (Currently Cancelled) The enzyme mixture of claim 2, wherein said DNA polymerase is selected from the group consisting of: Taq DNA polymerase, Tth DNA polymerase, UITma DNA polymerase, Tli DNA polymerase, Pfu DNA polymerase, KOD DNA polymerase, JDF-3 DNA polymerase, PGB-D DNA polymerase and DP1/DP2 DNA polymerase.

Claims 4-5. (Previously Cancelled).

6. (Currently Cancelled) An enzyme mixture comprising a first enzyme and a second enzyme, wherein said first enzyme is a wild type Pfu DNA polymerase, said second enzyme is a mutant Pfu DNA polymerase comprising a 3'-5' exonuclease activity and a reduced DNA polymerization activity.

Claims 7-8. (Previously Cancelled).

9. (Currently Cancelled) The enzyme mixture of claim 6, wherein said mutant Pfu DNA polymerase comprises one or more mutations at amino acid positions selected from the group consisting of: D405, Y410, T542, D543, K593, Y595, Y385, G387, and G388.

10. (Currently Cancelled) The enzyme mixture of claim 1 or 9, wherein said mutant Pfu DNA polymerase comprises one or more mutations selected from the group consisting of:

D405E, Y410F, T542P, D543G, K593T, Y595S, Y385Q, Y385S, Y385N, Y385L, Y385H, G387S, G387P, and G388P.

11. (Currently Cancelled) The enzyme mixture of claim 1, further comprising a PCR enhancing factor and/or an additive.

12. (Currently Cancelled) The enzyme mixture of claim 6, wherein said mutant Pfu DNA polymerase comprises a mutation in its partitioning domain or the polymerase domain.

13. (Currently Cancelled) A kit for DNA synthesis comprising a first enzyme, a second enzyme, and packaging material therefor, wherein said first enzyme comprises a DNA polymerization activity, said second enzyme is a mutant Pfu DNA polymerase comprising one or more mutations at amino acid positions selected from the group consisting of: D405, Y410, T542, D543, K593, Y595, Y385, G387, and G388.

14. (Currently Cancelled) The kit of claim 13, wherein said first enzyme is a DNA polymerase or a reverse transcriptase.

15. (Currently Cancelled) The kit of claim 14, wherein said DNA polymerase is selected from the group consisting of: Taq DNA polymerase, Tth DNA polymerase, UITma DNA polymerase, Tli DNA polymerase, Pfu DNA polymerase, KOD DNA polymerase, JDF-3 DNA polymerase, PGB-D DNA polymerase and DP1/DP2 DNA polymerase.

Claims 16-18. (Previously Cancelled).

19. (Currently Cancelled) A kit comprising an enzyme mixture for DNA synthesis, said kit comprises a first enzyme and a second enzyme, and packaging material therefore, wherein said first enzyme is a wild type Pfu DNA polymerase, said second enzyme is a mutant Pfu DNA polymerase comprising a 3'-5' exonuclease activity and a reduced DNA polymerization activity.

Claim 20. (Previously Cancelled).

21. (Currently Cancelled) The kit of claim 13 or 19, further comprising one or more components selected from the group consisting of: a deoxynucleotide, a reaction buffer, a PCR enhancing factor and/or an additive, a control DNA template and a control primer.

22. (Currently Cancelled) The kit of claim 19, wherein said mutant Pfu DNA polymerase comprises one or more mutations at amino acid positions selected from the group consisting of: D405, Y410, T542, D543, K593, Y595, Y385, G387, and G388.

23. (Currently Cancelled) The kit of claim 13 or 22, wherein said mutant Pfu DNA polymerase comprises one or more mutations selected from the group consisting of: D405E, Y410F, T542P, D543G, K593T, Y595S, Y385Q, Y385S, Y385N, Y385L, Y385H, G387S, G387P, and G388P.

Claims 24-27. (Previously Withdrawn from Consideration).

Claims 28-30. (Previously Cancelled).

Claims 31-63. (Previously Withdrawn from Consideration).

64. (Currently Added) An enzyme mixture comprising a first enzyme and a second enzyme, wherein said first enzyme is an Archaeal DNA polymerase, said second enzyme is a mutant Archaeal DNA polymerase comprising a 3'-5' exonuclease activity and a reduced DNA polymerization activity, wherein the mutant Archaeal DNA polymerase comprises a mutation selected from the group consisting of amino acid positions corresponding to D405, Y410, T542, D543, K593, Y595, Y385, G387, and G388 of Pfu DNA polymerase.

65. (Currently Added) The enzyme mixture of claim 64, wherein said mutant DNA polymerase is derived from a DNA polymerase selected from the group consisting of: Tli DNA polymerase (Vent DNA polymerase), Deep Vent DNA polymerase, Tgo DNA polymerase, Pfu DNA polymerase, KOD DNA polymerase, and JDF-3 DNA polymerase.

66. (Currently Added) The enzyme mixture of claim 65, wherein said mutant DNA polymerase comprises a mutation in its partitioning domain or polymerase domain.

67. (Currently Added) An enzyme mixture comprising a first enzyme and a second enzyme, wherein said first enzyme is a DNA polymerase, said second enzyme is a mutant Archaeal DNA polymerase comprising a 3'-5' exonuclease activity and a reduced DNA polymerization activity, wherein said mutant DNA polymerase comprises a mutation at a position as indicated in Tables 2A and 2B.

68. (Currently Added) The enzyme mixture of claim 67, wherein said mutant DNA polymerase comprising a mutation in its partitioning domain or polymerase domain is a mutant Pfu DNA polymerase, KOD DNA polymerase, or JDF-3 DNA polymerase.

69. (Currently Added) The enzyme mixture of claim 68, wherein said mutant Pfu DNA polymerase contains a mutation at an amino acid position selected from the group consisting of D405, Y410, T542, D543, K593, Y595, Y385, G387, and G388.

70. (Currently Added) The enzyme mixture of claim 69, wherein said mutant Pfu DNA polymerase contains a mutation of G387P.

71. (Currently Added) The enzyme mixture of claim 68, wherein said mutant KOD DNA polymerase contains a mutation at an amino acid position selected from the group consisting of Y384, G386, G387, D404, T541, D542, and K592.

72. (Currently Added) The enzyme mixture of claim 71, wherein said mutant KOD DNA polymerase contains a mutation of G387P.

73. (Currently Added) The enzyme mixture of claim 68, wherein said mutant JDF-3 DNA polymerase contains a mutation at amino acid position G387.

74. (Currently Added) The enzyme mixture of claim 73, wherein said mutant JDF-3 DNA polymerase contains a mutation of G387P.

75. (Currently Added) The enzyme mixture of claim 64, wherein said first enzyme and said second enzyme are derived from two different Archaeal DNA polymerases.

76. (Currently Added) The enzyme mixture of claim 75, wherein said first enzyme is wild type KOD or wild type JDF-3 DNA polymerase, and said second enzyme is a mutant Pfu DNA polymerase.

77. (Currently Added) The enzyme mixture of claim 76, wherein said mutant Pfu DNA polymerase contains a mutation at amino acid G387.

78. (Currently Added) The enzyme mixture of claim 77, wherein said mutant Pfu DNA polymerase contains a mutation of G387P.

79. (Currently Added) The enzyme mixture of claim 75, wherein said first enzyme is wild type Pfu DNA polymerase, and said second enzyme is a mutant KOD or mutant JDF-3 DNA polymerase.

80. (Currently Added) The enzyme mixture of claim 79, wherein said mutant KOD or mutant JDF-3 DNA polymerase contains a mutation of G387.

81. (Currently Added) The enzyme of claim 80, wherein said mutant KOD or mutant JDF-3 DNA polymerase contains a mutation of G387P.

82. (Currently Added) The enzyme mixture of claim 67, wherein said first enzyme is Taq DNA polymerase.

83. (Currently Added) The enzyme mixture of claim 82, wherein said second DNA polymerase is a mutant Pfu, a mutant KOD or a mutant JDF-3 DNA polymerase.

84. (Currently Added) The enzyme of claim 83, wherein said mutant Pfu, mutant KOD, or mutant JDF-3 DNA polymerase contains a mutation of G387P.

85. (Currently Added) A kit comprising an enzyme mixture comprising a first enzyme and a second enzyme, wherein said first enzyme is an Archaeal DNA polymerase, said second enzyme is a mutant Archaeal DNA polymerase comprising a 3'-5' exonuclease activity and a reduced DNA polymerization activity, wherein the mutant Archaeal DNA polymerase comprises a mutation selected from the group consisting of amino acid positions corresponding to D405,

Y410, T542, D543, K593, Y595, Y385, G387, and G388 of Pfu DNA polymerase, and packaging material therefor.

86. (Currently Added) A kit comprising an enzyme mixture comprising a first enzyme and a second enzyme, wherein said first enzyme is a DNA polymerase, said second enzyme is a mutant Archaeal DNA polymerase comprising a 3'-5' exonuclease activity and a reduced DNA polymerization activity, wherein said mutant DNA polymerase comprises a mutation at a position as indicated in Tables 2A and 2B, and packaging material therefor.

87. (Currently added) The kit of claim 85 or 86, further comprising a reagent selected from the group consisting of: dNTPs, reaction buffer, primer, and DNA enhancing factor.